

AFS METALCASTING FORECAST & TRENDS

2014



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Executive Summary

Publisher's Note: In 2010, the American Foundry Society (AFS) became the sole publisher of the annual *Forecast & Trends Report*. To issue this forecast, AFS has developed a computer-based economic modeling system for the metalcasting industry. (For a detailed explanation of the model, see p. 34.) Utilizing data from past forecasts, the U.S. government manufacturing census, performance data from leading casting purchasers, economic indicators, and industry and economic experts, this forecasting model is designed to deliver forecasts for casting shipments by metal and NAICS code for all major casting consuming industries (to see the industries covered, go to p. 26) through 2022.

This information can be delivered as a PDF file and as an excel spreadsheet depending upon customer needs. Complimentary access to this information is available to AFS Corporate Members. All others must pay a fee based on the information requested. The information presented in the AFS Forecast & Trends is based on the data supplied by the economic modeling system. It should be used solely for estimation purposes. AFS cannot be held responsible for the accuracy of this information. For further information or customized forecast data, contact AFS Customer Service at (800) 537-4237 or customerservice@afsinc.org.

U.S. metalcasting industry sales have recovered from a dramatic recession that began at the end of 2008 and continued through the first part of 2010. After shipping \$31.5 billion in castings in 2007, the industry bottomed out at \$21.6 billion in shipments in 2009 at the depth of the recession. The industry began to rebound in 2010 with an estimated growth of 18% from the previous year to \$25.46 billion, and this continued in 2011, when sales reached \$29.64 billion. The recovery is expected to continue through 2015 when sales will reach \$37.5 billion.

All cast metals are expected to see sales growth in the short term as customer demand continues to improve. Ductile iron, aluminum, compacted graphite iron and copper-base alloys see the greatest opportunities for long-term growth. While ductile iron growth is expected across all end markets, it is led by the oil and gas, automotive, construction, and pump and compressor markets. Steel growth will be led by the oil and gas, turbine, material handling, and pump and compressor markets. The return of the automotive and transportation markets should bring about long-term growth to aluminum and magnesium castings. For copper-base alloys, the valve, pump and compressor, and construction markets are keys to growth.

The U.S. metalcasting industry is made up of 1,978 facilities, down from 2,170 five years ago. This reduction can be attributed to the recession, technological advancements, foreign competition and tightening regulations.

The U.S. also saw changes in capacity availability and utilization over the past five years. In 2007, utilization was at 77% and dropped to 51% in 2009. That number jumped to 75% in 2011 and 82% in 2012. Total available capacity has dropped from 16,800,000 tons in 2007 to 16,470,000 today, but the current figure is an increase since the end of the recession as metalcasters have rebuilt capacity lost during those years.

The U.S. is second in the world in casting shipments based on tonnage, following China and ahead of India. Based on the data secured through the "2012 Annual Census of World Casting Production" by *Modern Casting* magazine, China shipped 42.5 million metric tons of castings in 2012 compared to 12.8 million metric tons by the U.S. and 9.34 by India. Following the U.S. and India are Japan (5.34 million metric tons), Germany (5.21), Russia (4.3), Brazil (2.86), Korea (2.44), Italy (1.96) and France (1.8) (see p. 20 for more details).

In the following pages of this report are tables depicting the breakdown of U.S. casting shipments by metal and end-use market with a forecast to 2022. This data is only an estimated forecast based on an economic modeling tool and should be used only as an estimate. AFS cannot be held liable for its accuracy.